Fermilab Analysis Group 3

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Goals and scope of the group

- All members of the group have interest in top/high-p_T physics
  - While there is no particular analysis topic(s) chosen yet, it is most likely be in the direction of a *W*+jets analysis

- At the moment, the priority of the group is to understand low-level objects (*e.g.*, jets) that are needed for top analyses

Steps towards accomplishing the goal (1)

- Look at available jet quantities in data, make sure they look sensible
  - Compare different jet finding algorithms for different cone sizes
    - How do they compare to Run 1?
    - How does the plug look like?
  - Using JET-50 data sample for these studies
    - Stripped data (~ 3 pb^{-1} so far) available on **fcdfsgi2:/cdf/data40b/s0/qcd/test/nataliak**
      - All of the available data will be stripped and put there -- the jobs are currently running.

Steps towards accomplishing the goal (2)

- Use Monte Carlo to perform jet selection optimization studies
  - Currently have 10k Herwig $t\bar{t}$ events in **fcdfsgi2:/cdf/data40b/s0/qcd/test/nataliak/MonteCarlo/herwig_ttbar**
    - Goal is to produce 20k signal events for starters
      - At the moment using ncdf124 to run MC
  - Learning how to use COMPHEP for *W*+jets background
    - Steve Mrenna is helping us out with this one

- Code for looking at *W/Z* + (1-6) jet candidates written
  - Should start looking into the high p_t lepton data sample soon
    - Need to start thinking about validating the sample